

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method for tracing an instrumented program, comprising:
registering an instrumentation provider with a tracing framework;
associating the instrumentation provider with a trace point to provide a probe in the
instrumented program;
selectively enabling the probe to obtain an enabled probe,
wherein enabling the probe comprises assuring that control flow is transferred to the
tracing framework when the enabled probe is fired, [[and]]
wherein enabling the probe is performed using a mechanism specific to the
instrumentation provider, and
wherein the probe is enabled for a plurality of multiplexed tracing consumers and
different actions are associated with the probe for each of the plurality of
multiplexed tracing consumers;
firing the enabled probe during execution of the instrumented program;
transferring control flow to the tracing framework when the enabled probe is fired, wherein
transferring control flow to the tracing framework is performed using the mechanism
specific to the instrumentation provider; and
performing [[an]] a first action associated with the probe for a first tracing consumer
selected from the plurality of multiplexed tracing consumers; and
performing a second action associated with the probe for a second tracing consumer selected
from the plurality of multiplexed tracing consumers,
wherein the first action and the second action [[is]] are performed by the tracing framework
[[when]] after control flow is transferred to the tracing framework.
2. (Original) The method of claim 1, further comprising:
receiving a request from a tracing consumer to selectively enable the probe.

3. (Original) The method of claim 2, wherein the request comprises a tuple having a name component, a module component, a function component, and a name component.
4. (Currently Amended) The method of claim 1, further comprising:
 disabling the enabled probe if no tracing consumer of the plurality of multiplexed tracing consumers is requesting the enabled probe.
5. (Original) The method of claim 1, further comprising:
 removing the probe when the instrumentation provider that provided the probe is unregistered.
6. (Original) The method of claim 1, wherein associating the instrumentation provider with the trace point comprises:
 determining whether the probe is currently provided at the trace point;
 requesting the tracing framework to create the probe if the probe is not currently provided at the trace point; and
 generating a probe identifier associated with the probe.
- 7-9. (Cancelled)
10. (Previously Presented) The method of claim 1, wherein transferring control flow to the tracing framework comprises calling the tracing framework using a probe identifier associated with the enabled probe.
11. (Currently Amended) A system for tracing an instrumented program having a trace point, comprising:
 a processor;
 a memory associated with the processor;
 a tracing framework resident in the memory and executing under control of the processor;
 an instrumentation provider resident in the memory and executing under control of the processor; and
 a tracing consumer resident in the memory and executing under control of the processor,

wherein the instrumentation provider is configured to associate the trace point to a probe and to enable the probe,

wherein enabling the probe comprises assuring that control flow is transferred to the tracing framework when the enabled probe is fired, [[and]]

wherein enabling the probe is performed using a mechanism specific to the instrumentation provider, and

wherein the probe is enabled for a plurality of multiplexed tracing consumers and different actions are associated with the probe for each of the plurality of multiplexed tracing consumers,

wherein the tracing consumer is configured to request that the probe be enabled, wherein the request defines ~~an action~~ a first action and a second action to perform when the enabled probe is fired, wherein the first action is associated with a first tracing consumer selected from the plurality of multiplexed tracing consumers and the second action is associated with a second tracing consumer selected from the plurality of multiplexed tracing consumers, and

wherein the tracing framework is configured to:

register the instrumentation provider,

forward the request to the instrumentation provider, and

perform the first action and the second action, ~~wherein the action is performed when~~ after control flow is transferred to the tracing framework using the mechanism specific to the instrumentation provider.

12. (Original) The system of claim 11, wherein the tracing framework is further configured to create the probe.
13. (Original) The system of claim 12, wherein creating the probe comprises assigning a probe identifier to the probe.

14. (Original) The system of claim 11, wherein associating the trace point to the probe comprises:
determining whether the probe is currently provided at the trace point;
requesting the tracing framework to create the probe if the probe is not currently provided at
the trace point; and
generating a probe identifier associated with the probe.
15. (Original) The system of claim 11, wherein the request comprises a tuple having a name
component, a module component, a function component, and a name component.
16. (Cancelled)
17. (Currently Amended) The system of claim [[16]] 1, wherein the tracing framework is provided
with a probe identifier when the probe is fired.
18. (Cancelled)
19. (Original) The system of claim 11, wherein the tracing framework is configured to unregister
the instrumentation provider when the instrumentation provider is unloaded.
20. (Currently Amended) A network system having a plurality of nodes, comprising:
an instrumented program having a trace point;
a tracing framework;
a tracing consumer; and
an instrumentation provider configured to associate the trace point to a probe and to enable
the probe,
wherein enabling the probe comprises assuring that control flow is transferred to the
tracing framework when the enabled probe is fired, [[and]]
wherein enabling the probe is performed using a mechanism specific to the
instrumentation provider, and

wherein the probe is enabled for a plurality of multiplexed tracing consumers and different actions are associated with the probe for each of the plurality of multiplexed tracing consumers,

wherein the tracing consumer is configured to request that the probe be enabled, wherein the request defines ~~an action~~ a first action and a second action to perform when the enabled probe is fired, wherein the first action is associated with a first tracing consumer selected from the plurality of multiplexed tracing consumers and the second action is associated with a second tracing consumer selected from the plurality of multiplexed tracing consumers,

wherein the tracing framework is configured to:

register the instrumentation provider,

forward the request to the instrumentation provider, and

perform the first action and the second action, ~~wherein the action is performed when~~
after control flow is transferred to the tracing framework using the mechanism specific to the instrumentation provider,

wherein the instrumented program resides on any node of the plurality of nodes,

wherein the instrumentation provider resides on any node of the plurality of nodes,

wherein the tracing consumer resides on any node of the plurality of nodes, and

wherein the tracing framework resides on any node of the plurality of nodes.

21. (Cancelled)

22. (Currently Amended) A computer storage device comprising instructions for enabling a computer system, under control of a processor, to perform a method for tracing an instrumented program, wherein the method comprises:

registering an instrumentation provider with a tracing framework;

associating the instrumentation provider with a trace point to provide a probe in the instrumented program;

selectively enabling the probe to obtain an enabled probe,

wherein enabling the probe comprises assuring that control flow is transferred to the tracing framework when the enabled probe is fired, [[and]]
wherein enabling the probe is performed using a mechanism specific to the instrumentation provider, and
wherein the probe is enabled for a plurality of multiplexed tracing consumers and different actions are associated with the probe for each of the plurality of multiplexed tracing consumers;
firing the enabled probe during execution of the instrumented program;
transferring control flow to the tracing framework when the enabled probe is fired, wherein transferring control flow to the tracing framework is performed using the mechanism specific to the instrumentation provider; and
performing [[an]] a first action associated with the probe for a first tracing consumer selected from the plurality of multiplexed tracing consumers; and
performing a second action associated with the probe for a second tracing consumer selected from the plurality of multiplexed tracing consumers,
wherein the first action and the second action [[is]] are performed by the tracing framework [[when]] after control flow is transferred to the tracing framework.

23. (Cancelled)

24. (Previously Presented) The method of claim 1, wherein the instrumentation provider is a dynamic module, and wherein registering the instrumentation provider is performed when the tracing framework is already loaded.